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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,503	06/24/2003	Maurizio Gazzola	CISCP819	2174

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EXAMINER	
LIU, LI	
ART UNIT	**PAPER NUMBER**
2613	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/20/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/602,503	GAZZOLA ET AL.
	Examiner	Art Unit
	Li Liu	2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/31/2006, Amendment*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 October 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/09/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 11 and 19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, 3, 11, 19 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al (US 2003/0016423) in view of Brazeau et al (US 2002/0126784).

1). With regard to claim 1, Cho et al disclose a method of operating an optical receiver system (Figure 2), said method comprising:

receiving an optical signal (200 in Figure 2);

converting said optical signal to an electrical signal (200 in Figure 2, [0028]);

automatically identifying a clock rate of said electrical signal ([0012], Figure 6 [0037]-[0042]; and

using said identified clock rate to select a signal type of said optical signal from a set of possible signal types (controller 350 determines the bit rate based on a look-up table, [0042]).

But, Cho et al does not disclose that the clock rate of the electrical signal is automatically identified through a clock recovery circuit including a phase-locked loop.

However, Brazeau et al, in the same field of endeavor, discloses a mechanism by which a clock recovery circuit with a phase-locked loop (PLL) is used to identify the data rate and lock onto data signal (Figures 1 and 2, page 1-2, [0012]-[0014]).

Brazeau et al's invention makes the programmable CDR to function in a fully transparent OEO wavelength switch, and truly data-rate transparent and independent ([0003] and [0004]). The band in the range of the date rate is no longer limited.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CDR circuit including PLL as taught by Brazeau et al to the system/method of Cho et al so that the bit rate-sensing and bit rate-recognition circuits can be removed due to the fully function of the CDR with the processor, and then the system cost can be reduced, and the processing of operation can be simplified.

2). With regard to claim 2, Cho et al in view of Brazeau et al discloses all of the subject matter as applied to claim 1 above. And Cho et al further disclose wherein automatically identifying said clock rate comprises:

attempting to lock to a bit clock of said electrical signal using a plurality of clock rates ([0017], a set of bit rate is stored in a memory);

upon achieving lock, determining a current one of said plurality of clock rates to be said identified clock rate ([0042]).

But, Cho et al does not expressly disclose that the bit clock rate of the electrical signal is automatically locked through a clock recovery circuit iteratively.

However, Brazeau et al, in the same field of endeavor, discloses a mechanism by which a clock recovery circuit with a phase-locked loop (PLL) is used to identify the data rate and lock onto data signal (Figures 1 and 2, page 1-2, [0012]-[0014]). And an iterative process is used to lock the bit clock of the electrical signal (Figure 2).

Brazeau et al's invention makes the programmable CDR to function in a fully transparent OEO wavelength switch, and truly data-rate transparent and independent ([0003] and [0004]). The band in the range of the date rate is no longer limited.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CDR circuit including PLL as taught by Brazeau et al to the system/method of Cho et al so that the bit rate-sensing and bit rate-recognition circuits can be removed due to the fully function of the CDR with the processor, and then the system cost can be reduced, and the processing of operation can be simplified.

3). With regard to claim 3, Cho et al in view of Brazeau et al discloses all of the subject matter as applied to claims 1 and 2 above. And Cho et al in view of Brazeau further discloses wherein automatically identifying said clock rate comprises:

evaluating a frequency difference (390 in Figure 6, the comparator compares the frequency between the input electrical signal with the reference clock signal, [0039]) between a bit clock recovered from said signal and a reference clock;

determining said identified clock rate based on said difference ([0041] and [0042]).

4). With regard to claim 11, Cho et al disclose an apparatus (Figure 2) for operating an optical receiver system, said apparatus comprising:

a clock recovery block (370 in Figure 2, and Figure 6) that recovers a clock signal from a received optical signal; and

a control processor (350 in Figue 2) that directs said clock recovery block to attempt to lock to said optical signal using a plurality of clock rates ([0017], a set of bit rate is stored in a memory), and that upon achieving lock using a clock rate matching that of said optical signal, employs said matching clock rate to determine a signal type of said optical signal ([0042]).

But, Cho et al does not expressly disclose that the control processor that directs said clock recovery block to attempt iteratively to lock to the optical signal using a plurality of clock rates.

However, Brazeau et al, in the same field of endeavor, discloses a mechanism by which a control processor directs a clock recovery circuit with a phase-locked loop (PLL) to attempt iteratively to lock to the optical data signal (Figures 1 and 2, page 1-2, [0012]-[0014]).

Brazeau et al's invention makes the programmable CDR to function in a fully transparent OEO wavelength switch, and truly data-rate transparent and independent ([0003] and [0004]). The band in the range of the date rate is no longer limited.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CDR circuit including PLL as taught by Brazeau et al to the system/method of Cho et al so that the bit rate-sensing and bit rate-recognition circuits can be removed due to the fully function of the CDR with the processor, and then the system cost can be reduced, and the processing of operation can be simplified.

5). With regard to claim 19, Cho et al disclose an apparatus for operating an optical receiver system (Figure 2), said apparatus comprising:

a clock recovery block (370 in Figure 2, and Figure 6) that receives a clock signal from a received optical signal and measures a difference of rate between said clock signal and a reference clock (390 in Figure 6, the comparator compares the frequency between the input electrical signal with the reference clock signal, [0039]); and

a control processor (350 in Figure 2) that, based on said difference of rate, determines a signal type of said received optical signal ([0041] and [0042]).

But, Cho et al does not expressly disclose that the control processor, based on the difference of rate from the **clock recovery block**, determines a signal type of said received optical signal.

However, Brazeau et al, in the same field of endeavor, discloses a mechanism by which a control processor determines a signal type of said received optical signal based on the difference of rate from the clock recovery block (Figures 1 and 2, page 1-2, [0012]-[0014], the processor will continue to increment the program frequency until it reaches the signal frequency).

Brazeau et al's invention makes the programmable CDR to function in a fully transparent OEO wavelength switch, and truly data-rate transparent and independent ([0003] and [0004]). The band in the range of the date rate is no longer limited.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CDR circuit including PLL as taught by Brazeau et al to the system of Cho et al so that the bit rate-sensing and bit rate-recognition circuits can be removed due to the fully function of the CDR with the processor, and then the system cost can be reduced, and the processing of operation can be simplified.

6). With regard to claim 27, Cho et al disclose an apparatus for operating an optical receiver system, said apparatus comprising:

means for receiving an optical signal (200 in Figure 2);

means for converting said optical signal to an electrical signal (200 in Figure 2, [0028]);

means for automatically identifying a clock rate of said electrical signal ([0012], Figure 6, [0037]-[0042]); and

means for using said identified clock rate to select a signal type of said optical signal from a set of possible signal types (controller 350 determines the bit rate based on a look-up table, [0042]).

But, Cho et al does not disclose that the clock rate of the electrical signal is automatically identified through a clock recovery circuit including a phase-locked loop.

However, Brazeau et al, in the same field of endeavor, discloses a mechanism by which a clock recovery circuit with a phase-locked loop (PLL) is used to identify the data rate and lock onto data signal (Figures 1 and 2, page 1-2, [0012]-[0014]).

Brazeau et al's invention makes the programmable CDR to function in a fully transparent OEO wavelength switch, and truly data-rate transparent and independent ([0003] and [0004]). The band in the range of the date rate is no longer limited.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the CDR circuit including PLL as taught by Brazeau et al to the system of Cho et al so that the bit rate-sensing and bit rate-recognition circuits can be removed due to the fully function of the CDR with the processor, and then the system cost can be reduced, and the processing of operation can be simplified.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 6-10, 14-18 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al (US 2003/0016423) and Brazeau et al (US 2002/0126784).

1). With regard to claims 6-10, Cho et al in view of Brazeau et al discloses all of the subject matter as in claim 1. And Cho et al also discloses that the bit-independent receiver can automatically detects that data rate of an input signal, including 1.25 Gb/s

and 2.488 Gb/s etc ([0005]). Cho et al also disclose that the receiver is capable of providing a wider range of bit rates of the optical signals recognizable in an optical communications system ([0011]).

But Cho et al in view of Brazeau et al does not explicitly disclose that the bit-independent receiver can detect the SONET OC-192, SDH STM-64, 10.325 Gbps, 10.709 Gbps and 11.090 Gbps *etc* optical signals.

Official notice is taken that it was well known in the art at the time the invention was made to enable optical communication systems to communicate using SONET OC-192, SDH STM-64, 10.325 Gbps,10.709 Gbps and 11.090 Gbps optical signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the bit-independent receiver of Cho et al and Brazeau et al to automatically detect SONET OC-192, SDH STM-64, 10.325 Gbps,10.709 Gbps and 11.090 Gbps optical communication signals. One of ordinary skill would have realized the benefit of increasing the number of recognizable signals detectable by the bit-independent receiver of Cho et al and of Brazeau et al.

2). With regard to claims 14-18, Cho et al in view of Brazeau et al discloses all of the subject matter as in claim 11. And Cho et al also discloses that the bit-independent receiver can automatically detects that data rate of an input signal, including 1.25 Gb/s and 2.488 Gb/s etc ([0005]). Cho et al also disclose that the receiver is capable of providing a wider range of bit rates of the optical signals recognizable in an optical communications system ([0011]).

But Cho et al in view of Brazeau et al does not explicitly disclose that the bit-independent receiver can detect the SONET OC-192, SDH STM-64, 10.325 Gbps, 10.709 Gbps and 11.090 Gbps *etc* optical signals.

Official notice is taken that it was well known in the art at the time the invention was made to enable optical communication systems to communicate using SONET OC-192, SDH STM-64, 10.325 Gbps,10.709 Gbps and 11.090 Gbps optical signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the bit-independent receiver of Cho et al and Brazeau et al to automatically detect SONET OC-192, SDH STM-64, 10.325 Gbps,10.709 Gbps and 11.090 Gbps optical communication signals. One of ordinary skill would have realized the benefit of increasing the number of recognizable signals detectable by the bit-independent receiver of Cho et al and of Brazeau et al.

3). With regard to claims 22-26, Cho et al in view of Brazeau et al discloses all of the subject matter as in claim 19. And Cho et al also discloses that the bit-independent receiver can automatically detects that data rate of an input signal, including 1.25 Gb/s and 2.488 Gb/s etc ([0005]). Cho et al also disclose that the receiver is capable of providing a wider range of bit rates of the optical signals recognizable in an optical communications system ([0011]).

But Cho et al in view of Brazeau et al does not explicitly disclose that the bit-independent receiver can detect the SONET OC-192, SDH STM-64, 10.325 Gbps, 10.709 Gbps and 11.090 Gbps *etc* optical signals.

Official notice is taken that it was well known in the art at the time the invention was made to enable optical communication systems to communicate using SONET OC-192, SDH STM-64, 10.325 Gbps,10.709 Gbps and 11.090 Gbps optical signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to enable the bit-independent receiver of Cho et al and Brazeau et al to automatically detect SONET OC-192, SDH STM-64, 10.325 Gbps,10.709 Gbps and 11.090 Gbps optical communication signals. One of ordinary skill would have realized the benefit of increasing the number of recognizable signals detectable by the bit-independent receiver of Cho et al and of Brazeau et al.

6. Claims 4, 5, 12, 13, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho et al (US 2003/0016423) and Brazeau et al (US 2002/0126784) as applied to claims 1, 11 and 19 above, and in further view of Marmur (US 6,466,886).

1). With regard to claim 4, Cho et al in view of Brazeau et al discloses all of the subject matter as applied to claim 1 above. But Cho et al in view of Brazeau et al does not explicitly disclose that the method further comprises, based on said signal type, selecting a traffic processing block to further process said electrical signal.

However, Marmur, in the same field of endeavor, discloses a method which selects a traffic processing block to further process said electrical signal based on said signal type (19, 21, 14 and 23 in Figure 1 and Figure 2, since the demodulator DE-MUX has a plural of outputs the FEC and Performance Monitor 19 can be interpreted to have several traffic blocks inside, and control module FPGA 31 in Figure 2 control the traffic process, performance monitor and the further process of the identified signal, and the

E/O transmitter module 23 regenerates the output optical signal based on the identified signal types).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the system taught by Marmur to the system of Cho et al and Brazeau et al so that the optical transponder is capable of effectively processing different signal types, and facilitating inventory reduction.

2). With regard to claim 5, Cho et al discloses all of the subject matter as applied to claim 1 above. But Cho et al in view of Brazeau et al does not explicitly teach that the method, based on said signal type, selects a performance monitoring method to monitor quality of said optical signal.

However, Marmur, in the same field of endeavor, disclose a method which selects a performance monitoring method based on said signal type (performance monitoring PM 19 in Figure 1 and Figure 2, column 1 line 26-56, column 3 line 47-56) to monitor quality of said optical signal.

Optical performance monitoring is essential for managing high capacity optical transmission and switching system. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the system taught by Marmur with the system of Cho et al and Brazeau et al so that the optical transponder is capable of effecting performance monitoring on the identified signal type and further increasing the deployment flexibility, and different signal rate can be better processed and further be transmitted.

3). With regard to claim 12, Cho et al in view of Brazeau et al discloses all of the subject matter as applied to claim 11 above. But Cho et al in view of Brazeau et al does not explicitly disclose wherein said control processor, based on said signal type, selects a traffic processing block to further process said electrical signal.

However, Marmur, in the same field of endeavor, discloses a control processor which selects a traffic processing block to further process said electrical signal based on said signal type (19, 21, 14 and 23 in Figure 1 and Figure 2, since the demodulator DE-MUX has a plural of outputs the FEC and Performance Monitor 19 can be interpreted to have several traffic blocks inside, and control module FPGA 31 in Figure 2 control the traffic process, performance monitor and the further process of the identified signal, and the E/O transmitter module 23 regenerates the output optical signal based on the identified signal types).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the control processor taught by Marmur to the apparatus of Cho et al and Brazeau et al so that the optical transponder is capable of effectively processing different signal types, and facilitating inventory reduction.

4). With regard to claim 13, Cho et al in view of Brazeau et al discloses all of the subject matter as applied to claim 11 above. But Cho et al in view of Brazeau et al does not explicitly teach wherein said control processor, based on said signal type, selects a performance monitoring block to monitor quality of said optical signal.

However, Marmur, in the same field of endeavor, discloses a method which selects a performance monitoring method based on said signal type (performance

monitoring PM 19 in Figure 1 and Figure 2, column 1 line 26-56, column 3 line 47-56) to monitor quality of said optical signal.

Optical performance monitoring is essential for managing high capacity optical transmission and switching system. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the performance monitoring taught by Marmur with the apparatus of Cho et al and Brazeau et al so that the optical transponder is capable of effecting performance monitoring on the identified signal type and further increasing the deployment flexibility, and different signal rate can be better processed and further be transmitted.

5). With regard to claim 20, Cho et al in view of Brazeau et al discloses all of the subject matter as applied to claim 19 above. But Cho et al in view of Brazeau et al does not explicitly disclose wherein said control processor, based on said signal type, selects a traffic processing block to further process said electrical signal.

However, Marmur, in the same field of endeavor, discloses a control processor which selects a traffic processing block to further process said electrical signal based on said signal type (19, 21, 14 and 23 in Figure 1 and Figure 2, since the demodulator DE-MUX has a plural of outputs the FEC and Performance Monitor 19 can be interpreted to have several traffic blocks inside, and control module FPGA 31 in Figure 2 control the traffic process, performance monitor and the further process of the identified signal, and the E/O transmitter module 23 regenerates the output optical signal based on the identified signal types).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the control processor taught by Marmur to the apparatus of Cho et al and Brazeau et al so that the optical transponder is capable of effectively processing different signal types, and facilitating inventory reduction.

6). With regard to claim 21, Cho et al in view of Brazeau et al discloses all of the subject matter as applied to claim 19 above. But Cho et al in view of Brazeau et al does not explicitly teach wherein said control processor, based on said signal type, selects a performance monitoring block to monitor quality of said optical signal.

However, Marmur, in the same field of endeavor, disclose a method which selects a performance monitoring method based on said signal type (performance monitoring PM 19 in Figure 1 and Figure 2, column 1 line 26-56, column 3 line 47-56) to monitor quality of said optical signal.

Optical performance monitoring is essential for managing high capacity optical transmission and switching system. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the performance monitoring taught by Marmur with the apparatus of Cho et al and Brazeau et al so that the optical transponder is capable of effecting performance monitoring on the identified signal type and further increasing the deployment flexibility, and different signal rate can be better processed and further be transmitted.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

McCormack et al (US 6,178,213) discloses an adaptive data recovery system and methods.

Scheytt et al (Scheytt et al: "A 0.155-, 0.622-, and 2.488-Gb/s Automatic Bit-Rate Selecting Clock and Data Rrecovery IC for Bit-Rate Transparent SDH Systems", IEEE Journal of Solid-State Circuits, Vol. 34, No. 12, December 1999, page 1935-1943) discloses an automatic bit-rate selecting system, and "[t]he circuit represents the first automatic frequency selecting CDR IC for SDH/SONET systems".

Cho et al (US 7,050,463) discloses an automatic bit-rate detection scheme for use on SONET transceiver.

Doh et al (US 6,684,033) discloses a bit rate detection circuit and algorithm for optical networks.

Earnest (US 5,982,837) discloses an automatic baud rate detector.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Liu whose telephone number is (571)270-1084. The examiner can normally be reached on Mon-Fri, 8:00 am - 5:30 pm, alternating Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Vanderpuye can be reached on (571)272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Li Liu, December 18, 2006

KENNETH VANDERPUYE
SUPERVISORY PATENT EXAMINER